AKZO

Salt Division

19 August 1992

Director, Water Management Division
U.S. ENVIRONMENTAL PROTECTION AGENCY
26 Federal Plaza
New York, New York 10278

Attention: Drinking/Ground Water Protection Branch

Ref: UIC Permit NYU 63860

Dear Sir:

This letter serves as notification of our intent to drill one new Class III solution mining well and to rework the existing solution mining well No. 50 within the Watkins Glen brinefield as authorized by the referenced permit. Copies of the New York State permit application are attached for your review. The new Well 58 is to be drilled to replace existing wells that are nearing depletion, and Well 50 is to be reworked to produce brine from the Syracuse 'F' salt, which is within the permitted injection zone.

Completed forms 7520-10 and 7520-12 shall be submitted to your office at the completion of well construction per Part I (F) of the permit. I understand that the first form supercedes 7520-9, which is referenced in the permit.

Sincerely,

M J Schumacher

Michael J. Schumacher
Project Manager

MJS:fab
Attachment
Pmt63860

Akzo Salt Inc.
Abington
Executive Park
P O Box 352
Clarks Summit,
Pennsylvania
18411-0352
Phone and Fax:
717/587-5131
Cable: ISCO,
Clarks Summit, PA
Telex: 83-1872

85-12-5 (1/84)

NEW YORK STATE
DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MINERAL RESOURCES • OIL AND GAS REGULATION

PRINT OR TYPE IN BLACK INK.

APPLICATION FOR PERMIT TO DRILL, DEEPEN, PLUG BACK OR CONVERT A WELL SUBJECT TO THE OIL, GAS AND SOLUTION MINING LAW

THIS APPLICATION IS A LEGAL DOCUMENT. READ THE APPLICABLE AFFIRMATION AND ACKNOWLEDGEMENT CAREFULLY BEFORE SIGNING. THIS APPLICATION IS CONTINUED ON THE REVERSE SIDE.

PLANNED OPERATION: (Check one)
☒ Drill ☐ Deepen ☐ Plug Back ☐ Conversion

NAME OF OWNER (Full Name of Organization or Individual): Akzo Salt Inc.
TELEPHONE NUMBER (include area code): 717 | 587-9353

ADDRESS (P.O. Box or Street Address, City, State, Zip Code): P. O. Box 352 Clarks Summit, PA 18411

NAME AND TITLE OF LOCAL REPRESENTATIVE WHO CAN BE CONTACTED WHILE OPERATIONS ARE IN PROGRESS: James A. Loose, Plant Manager

ADDRESS—Business (P.O. Box or Street Address, City, State, Zip Code): P. O. Box 110, Salt Point Road, Watkins Glen, NY 14891
TELEPHONE NUMBER (include area code): 607 | 535-2721

ADDRESS—Night, Weekend and Holiday (P.O. Box or Street Address, City, State, Zip Code): Night Supervisor
TELEPHONE NUMBER (include area code): 607 | 535-2721

WELL LOCATION DATA (attach three plats)

COUNTY: Schuyler
TOWN: Reading
FIELD/POOL NAME (or "wildcat"): Watkins Glen

LEASE OR UNIT NAME: International Salt
WELL NUMBER: 58
NUMBER OF ACRES IN LEASE OR UNIT: 527

LOCATION DESCRIPTION
7½" Quad. Name Reading Center
15000 Ft. N ☒ of 42-22-30.264 Latitude
6700 Ft. W of 76-52-28.852 Longtitude

PROPOSED WELL DATA

TYPE OF WELL (Check one)
☐ Gas Producer ☐ Oil Producer ☐ Input ☐ Storage
☒ Brine ☐ Other _____

PLANNED TOTAL DEPTH: 2550 ft.
PLANNED DATE OF COMMENCEMENT OF OPERATIONS: October 1992

SURFACE ELEVATION (Check how obtained)
815 ft. ☐ Surveyed ☐ Altimeter ☒ Topo Map

TYPE TOOLS
☐ Cable ☒ Rotary

PLANNED DRILLING FLUID
☐ Air ☐ Water ☒ Mud

NAME OF PLANNED CONTRACTOR (If known):
TELEPHONE NUMBER (include area code):

GIVE DETAILS FOR EACH PROPOSED CASING STRING AND CEMENT JOB INCLUDING BUT NOT LIMITED TO: Bit size, casing size, weight and grade, depth casing set, scratchers, centralizers, cement baskets, sacks of cement, class of cement, cement additives with percentages or pounds per sack, estimated top of cement, estimated amount of excess cement and waiting on cement time. Attach additional sheets as required.

See attached program.

DEPARTMENT USE ONLY

BOND NUMBER
API NUMBER
PERMIT NUMBER
DATE ISSUED

WATKINS GLEN - WELL #58

Drilling Procedure

1. Drill a 17½" hole at least 75 feet past the bottom of the surface drift (approximately 130') and cement a centrallized 13-3/8" 61 lb/ft H-40 casing to surface using Class A cement with 3% $CaCl_2$ and 50% excess. Wait on cement 12 hours before drilling out.

2. Drill a 12-1/4" hole to the top of the F6 salt (approximately 2130'). Obtain a 4" core through the bottom of the'F1' salt bed (approximately 2550'). Ream to 12-1/4".

3. Run a gamma ray/compensated density wireline log from T.D. to surface.

4. Place a centrallized 9-5/8" 36 lb/ft casing string to 10 feet below the top of the F5/2 salt bed (approximately 2150'). Rough coat the bottom 3 joints of casing. Casing to have secondary teflon seals on all connections.

5. Cement the string to surface with 25% excess over the calipered hole size. The lead slurry is to be 50/50 Pozmix with 3% $CaCl_2$, 3% gel and the tail slurry 200 sacks of salt saturated Class 'A' cement. The tail slurry must fill at least the bottom 500 feet. Sufficient cement is to be provided to obtain surface returns. Any fallback is to be grouted from the surface.

6. Perform a pressure test.

7. Drill out the plug after 24 hours. Circulate the hole with clean, saturated brine.

8. Install a casing head and a temporary cap.

Completion

1. At least 30 days after the 9-5/8" casing is cemented in place, run a cement bond log.
2. Install the wellhead.
3. Install 7" 20 or 23 lb/ft tubing to 20 feet from the bottom of the 'F1' salt bed.
4. Install 4-1/2" 10.5 lb/ft tubing to 2 feet from the bottom of the 'F1' salt bed.
5. Install water and brine piping to the well.

8-19-92

WGWel 58

WATKINS GLEN - WELL #50

Workover Procedure

1. Run gamma ray neutron and cement evaluation logs in Wells #50 and neutron log in Well #51 to determine cavern depths. A sonar caliper survey may be conducted in Well #51, if needed.

2. Obtain ground survey to locate Well #51 relative to Well #50.

3. Set a bridge plug in Well #50 at 2520'.

4. Mill the existing 8-5/8" casing from 2430' to 2490'.

5. Place a cement plug from the bridge plug at 2520' to 2410'.

6. Drill out the cement plug with a 6-1/8" bit to 2470'.

7. Run directional surveys in Wells #50 and 51 to determine bottom hole locations.

8. Drill a 50 foot radius curve and 6-1/8" lateral section to intercept the existing cavern at Well #51 at a target depth of 2520' (relative to Well #50 ground level), approximately 400 feet to the east.

8-14-92

WGWEL50

85-16-5 (9/90)—10b

NEW YORK STATE DEPARTMENT OF ENVIRONMENTAL CONSERVATION
DIVISION OF MINERAL RESOURCES

ENVIRONMENTAL ASSESSMENT FORM

Attachment to Drilling Permit Application

WELL NAME AND NUMBER: Watkins Glen No. 58

NAME OF APPLICANT: Akzo Salt Inc.

BUSINESS TELEPHONE NUMBER: (607) 535-2721

ADDRESS OF APPLICANT: P.O. Box 110, Salt Point Road

CITY/P.O.: Watkins Glen

STATE: NY

ZIP CODE: 14891

DESCRIPTION OF PROJECT (Briefly describe type of project or action)

Construction of one additional salt solution mining well.

PROJECT SITE IS THE WELL SITE AND SURROUNDING AREA WHICH WILL BE DISTURBED DURING CONSTRUCTION OF SITE, ACCESS ROAD, and PIT AND ACTIVITIES DURING DRILLING AND COMPLETION AT WELLHEAD.
(PLEASE COMPLETE EACH QUESTION—Indicate N.A., if not applicable)

LAND USE AND PROJECT SITE

1. Project Dimensions. Total Area of Project Site 21875 sq. ft.
   Approximate square footage for items below:

	During Construction (sq. ft.)	After Construction (sq. ft.)
a. Access Road (length × width)	Existing 12 ft. wide road will be used for access.	
b. Well Site (length × width)	175 x 125	80 x 40

2. Characterize Project Site Vegetation and Estimate Percentage of Each Type Before Construction:

_____% Agricultural (cropland, hayland, pasture, vineyard, etc.) _____% Forested _____% Wetlands

100 % Meadow or Brushland (non agricultural) _____% Non vegetated (rock, soil, fill)

3. Present Land Use(s) Within ¼ Mile of Project (Check all that apply)

☒ Rural ☐ Suburban ☒ Forest ☐ Urban ☒ Agricultural ☒ Commercial ☐ Park/Recreation
☒ Industrial ☐ Other _____

4. How close is the nearest residence, building, or outdoor facility of any type routinely occupied by people at least part of the day? 300 ft.
   Describe A motel and tourist cabins

ENVIRONMENTAL RESOURCES ON/NEAR PROJECT SITE

5. The presence of certain environmental resources on or near the project site may require additional permits, approvals or mitigation measures—
   Is any part of the **well site** or **access road** located:

a. Over a primary or principal aquifer?	☐ Yes	☒ No	☐ Not Known
b. Within 2,640 feet of a public water supply well?	☐ Yes	☒ No	☐ Not Known
c. Within 150 feet of a surface municipal water supply?	☐ Yes	☒ No	☐ Not Known
d. Within 150 feet of a lake, stream, or other public surface water body?	☒ Yes	☐ No	☐ Not Known
e. Within an Agricultural District?	☐ Yes	☐ No	☒ Not Known
f. Within a land parcel having a Soil and Water Conservation Plan?	☐ Yes	☐ No	☒ Not Known
g. In a 100 year flood plan?	☐ Yes	☒ No	☐ Not Known
h. In a regulated wetland or its 100 foot buffer zone?	☐ Yes	☒ No	☐ Not Known
i. In a coastal zone management area?	☐ Yes	☒ No	☐ Not Known
j. In a Critical Environmental Area?	☐ Yes	☒ No	☐ Not Known
k. Does the project site contain any species of animal life that are listed as threatened or endangered?	☐ Yes	☐ No	☒ Not Known
If yes, identify the species and source of information _____			
l. Will the proposed project significantly impact visual resources of statewide significance?	☐ Yes	☒ No	☐ Not Known
If yes, identify the visual resource and source of information _____			

CULTURAL RESOURCES

6. Are there any known archeological and/or historical resources which will be affected by drilling operations? ☐ Yes ☐ No ☒ Not Known

7. Has the land within the project area been previously disturbed or altered (excavated, landscaped, filled, utilities installed)? ☒ Yes ☐ No ☐ Not Known

If answer to Number 6 or 7 is yes, briefly describe Project is within the Akzo Salt brinefield, near a a pond constructed to contain brine. No earlier disturbances are known.

EROSION AND RECLAMATION PLANS

8. Indicate percentage of project site within: 0-10% slope 100 % 10-15% slope _____ % greater than 15% slope _____ %

9. Are erosion control measures needed during construction of the access road and well site? ☐ Yes ☒ No ☐ Not Known

If yes, describe and/or sketch on attached photocopy of plat _____

10. Will the topsoil which is disturbed be stockpiled for reclamation use? ☒ Yes ☐ No

11. Does the reclamation plan include revegetation? ☐ Yes ☒ No

If yes, what plant materials will be used? _____

12. Does the reclamation plan include restoration or installation of surface or subsurface drainage features to prevent erosion or conform to a Soil and Water Conservation Plan? ☐ Yes ☒ No

If yes, describe _____

ACCESS ROAD SITING AND CONSTRUCTION

13. Are you going to use existing or common corridors when building the access road? Locate access road on attached photocopy of plat. ☒ Yes ☐ No

DRILLING

14. Anticipated length of drilling operations? 14 days.

WASTE STORAGE AND DISPOSAL

15. How will drilling fluids and stimulation fluids:

a. Be contained? Steel tanks and a plastic-lined reserve pit.

b. Be disposed of? Brine will be decanted off and injected into solution mining wells.

16. Will production brine be stored on site? ☒ Yes ☐ No

If yes:
How will it be stored? In an existing pond and tanks

How will it be disposed of? Brine is feedstock for a salt production plant.

17. Will the drill cuttings and pit liner be disposed of on site? ☒ Yes ☐ No

If yes, expected burial depth? 2 feet

ADDITIONAL PERMITS

18. Are any additional State, Local or Federal permits or approvals required for this project? ☐ Yes ☒ No

	Date Application Submitted	Date Application Received
Stream Disturbance Permit (DEC)		
Wetlands Permit (DEC or Local)		
Floodplain Permit (DEC or Local)		
Other _____		
_____		
_____		
_____		

PREPARER'S SIGNATURE M J Schumacher DATE 8/14/92

NAME/TITLE (Please print)
Michael J. Schumacher, Minerals Development Engineer

REPRESENTING
Akzo Salt Inc.